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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/766,584	01/23/2001	Munenori Watanabe	010054	2355

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EXAMINER

JONES, JUDSON

ART UNIT PAPER NUMBER

2834

DATE MAILED: 09/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/766,584

Applicant(s)

WATANABE, MUNENORI

Examiner

Judson H Jones

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6 and 7 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over La France 3,787,716 A (of record) in view of Barrett et al. 5,373,120 A (of record) and Popov et al. 4,287,444 A. La France discloses a linear motor having magnetic members 22 with coils wound in a pair of slots on both sides of the magnetic member and field magnets 20 having alternating polarity and facing the coils. La France discloses two magnetic members wound with coils as described in column 4 lines 10-24 but states that a single magnetic member would be the most effective winding configuration. The problem faced by La France is that the field magnets are attached to side rail members serving as track rails for a vehicle and thus the side rails are a considerable distance apart. To maintain the correct air gap between the fixed and movable members, La France divided the movable member into two parts to make setting the air gaps easier. Barrett et al. discloses a small linear motor 36, 34 as shown in figure 3. Since La France and Barrett et al. are both from the same field of endeavor, it would have been obvious for one of ordinary skill in the art to have reduced the size of the La France device by combining the two movable members together to make it usable in situations where a small motor was needed. Alternately, if the La France device needed to have high power and large size and cost was not an object, it would be possible to set the side rails of the device accurately enough that a single

Art Unit: 2834

unitary movable member could be used. La France as modified by Barrett et al. discloses the linear motor with the coils and field magnets but does not disclose coils having a plurality of phases wound in respective pairs of slots where each pair of adjacent phases are different in electrical angle from each other. Popov et al. teaches in figure 1 and in column 4 lines 1-4 having each pair of adjacent phases different in electrical angle from each other for the purpose of increasing motor power as described in column 2 lines 61-68. Since Popov et al. and La France as modified by Barrett et al. are from the same field of endeavor it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized coils having a plurality of phases wound in respective pairs of slots where each pair of adjacent phases are different in electrical angle from each other for the purpose of increasing motor power.

In regard to claim 3, see Barrett et al. column 4 lines 43 and 33.

In regard to claim 4, Applicant is claiming the cover member includes two parts that are fastened together by connecting means. According to *In re Lockhart*, 90 USPQ 214 (CCPA 1951), "It appears to us that the unity or diversity of parts would depend more upon the choice of the manufacturer, and the convenience and availability of the machines and tools necessary to construct the syringe, than on any inventive concept." Therefore the division of the cover member into two parts that are fastened together by a fastening means is given no patentable weight.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over La France in view of Barrett et al. and Popov et al. as applied to claim 1 above, and further in view of Halm 5,644,178 A. La France as modified by Barrett et al. and Popov et al. discloses the linear motor but does not disclose a non-magnetic material filled in a space between said magnetic member

Art Unit: 2834

and said cover member. However, Halm teaches filling the space between the stator and housing with non-magnetic material in column 4 lines 28-35. Since Halm and La France as modified by Barrett et al. and Popov et al. are from the same field of endeavor, it would have been obvious for one of ordinary skill in the art to have filled the space between the stator and the cover of La France as modified by Barrett et al. and Popov et al. in order to provide protection for the stator windings and to strengthen the motor.

Allowable Subject Matter

Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not disclose or teach making a connection means for a cover where the connection means also serves as a thermal conductivity member in combination with the other features of claim 5.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Payen 3,622,818 A discloses another linear motor coils having a plurality of phases wound in respective pairs of slots where each pair of adjacent phases are different in electrical angle from each other as shown in figure 1.

Any inquiry concerning this communication should be directed to Judson H Jones whose telephone number is 703-308-0115. The examiner can normally be reached on 8-4:30 M-F.

Art Unit: 2834

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JHJ

JHJ 9/12/2003

KARL TAMM
PRIMARY EXAMINER

Karl Tamm